NOKIA	CONFIDENTIAL		1(11)
Customer Care Europe, Middle East & Africa	DCT-4 Common Baseband	Version 2.0 Approved	
SCCE Training Group	RH-20	(PCB) Version_1A0_09	
	21.04.2004		

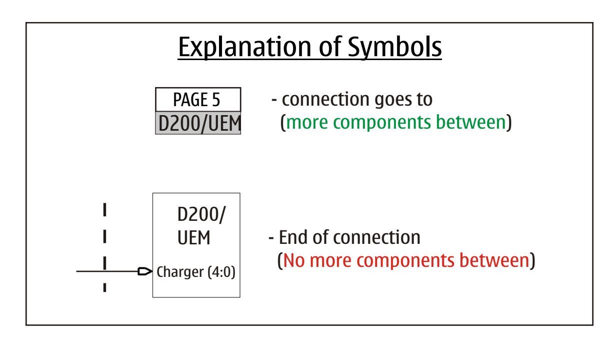


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CAMERA — Page 4 — Components: 1000-1025

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MULTIGND

RF_BB — gsm_iset — Page 9 — Components: 420-439

AUDIO — Page 3 — AUDIO Components: 150-199 — ANCO Components: 170-199

POWER — Page 5 — POWER Components: 200-299 — STEPUP Components:260-269 — DC/DC Components:270-299

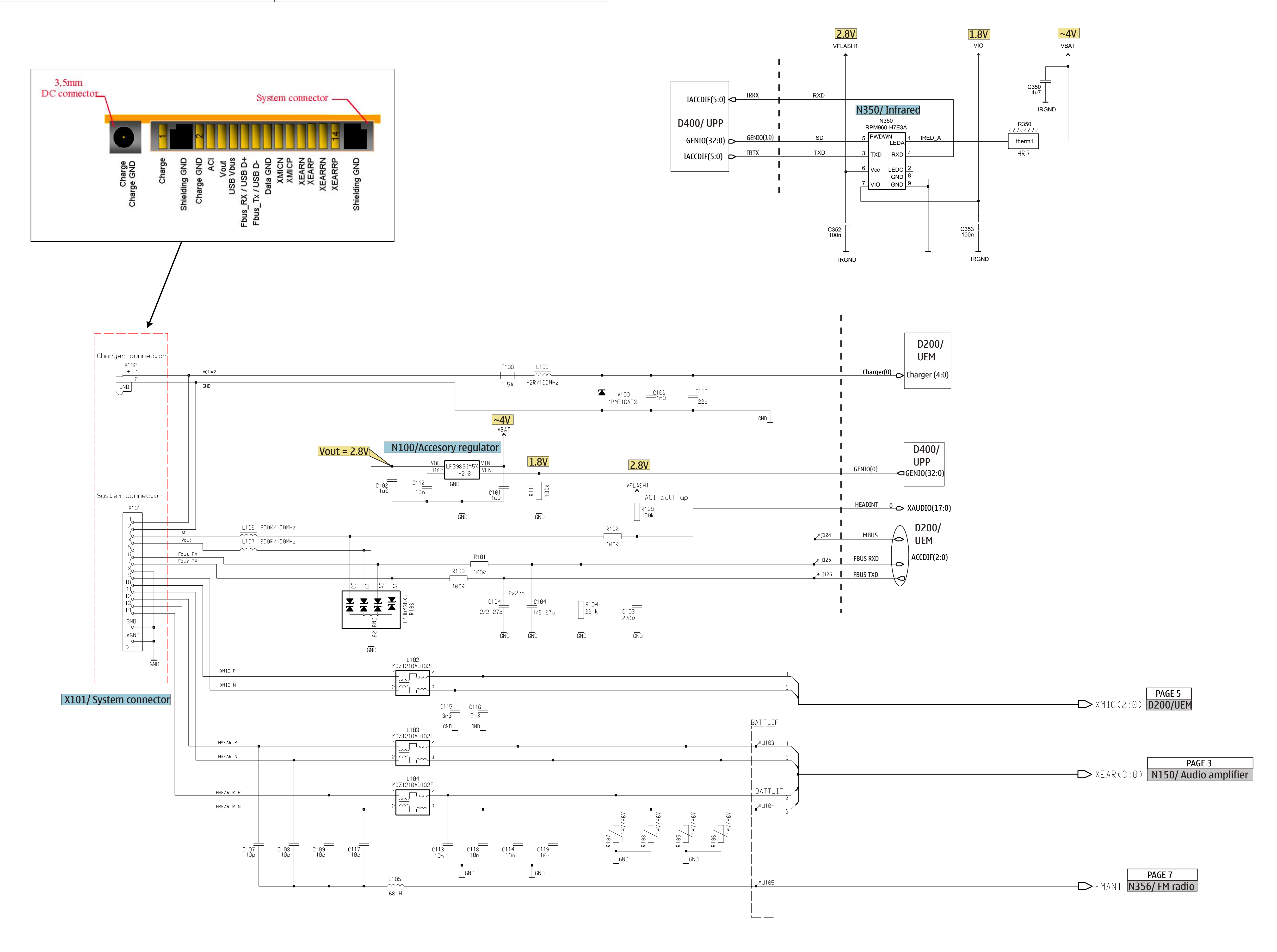
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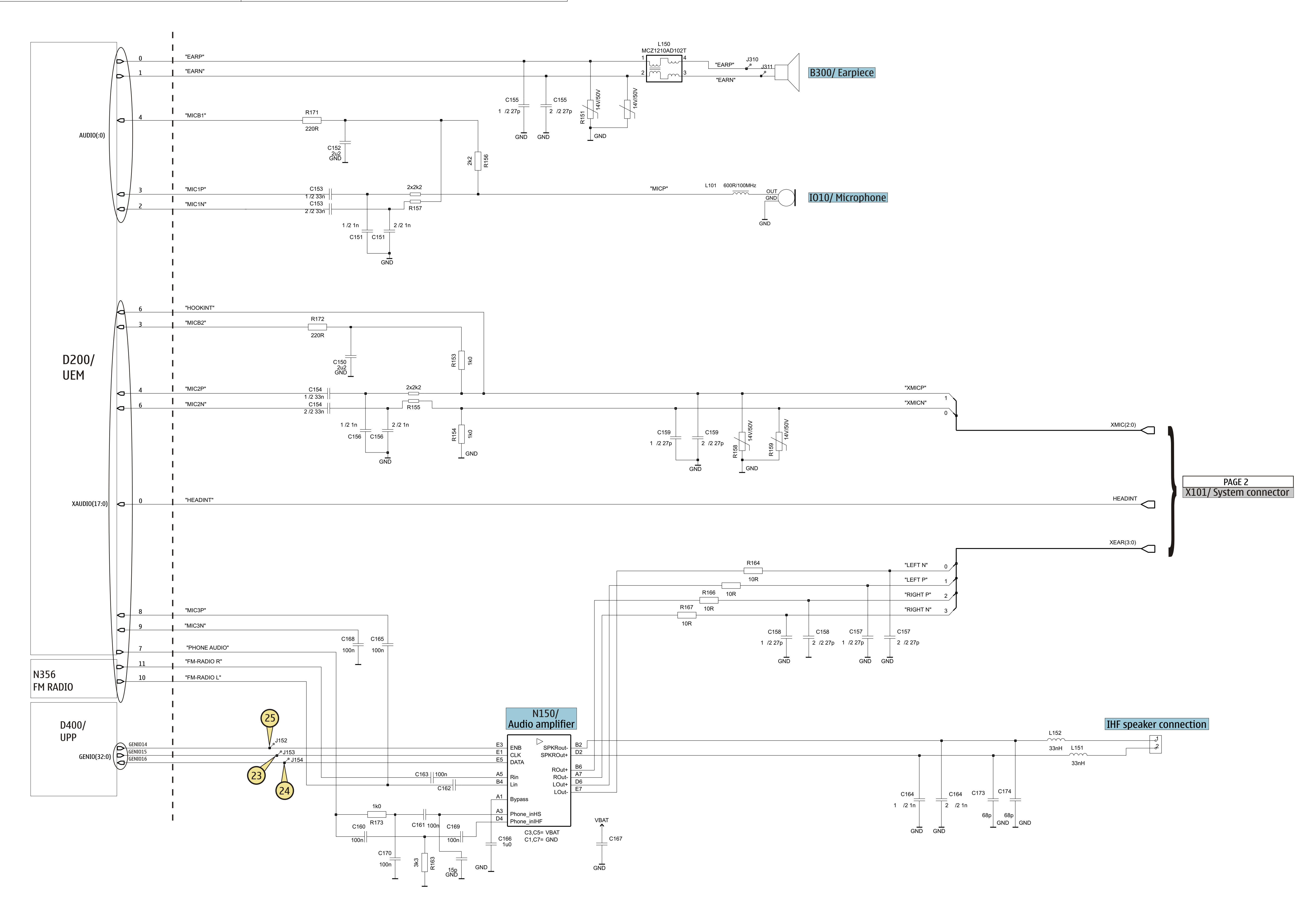
IR — rohm_1.8V — Page 2 — Components: 350-355

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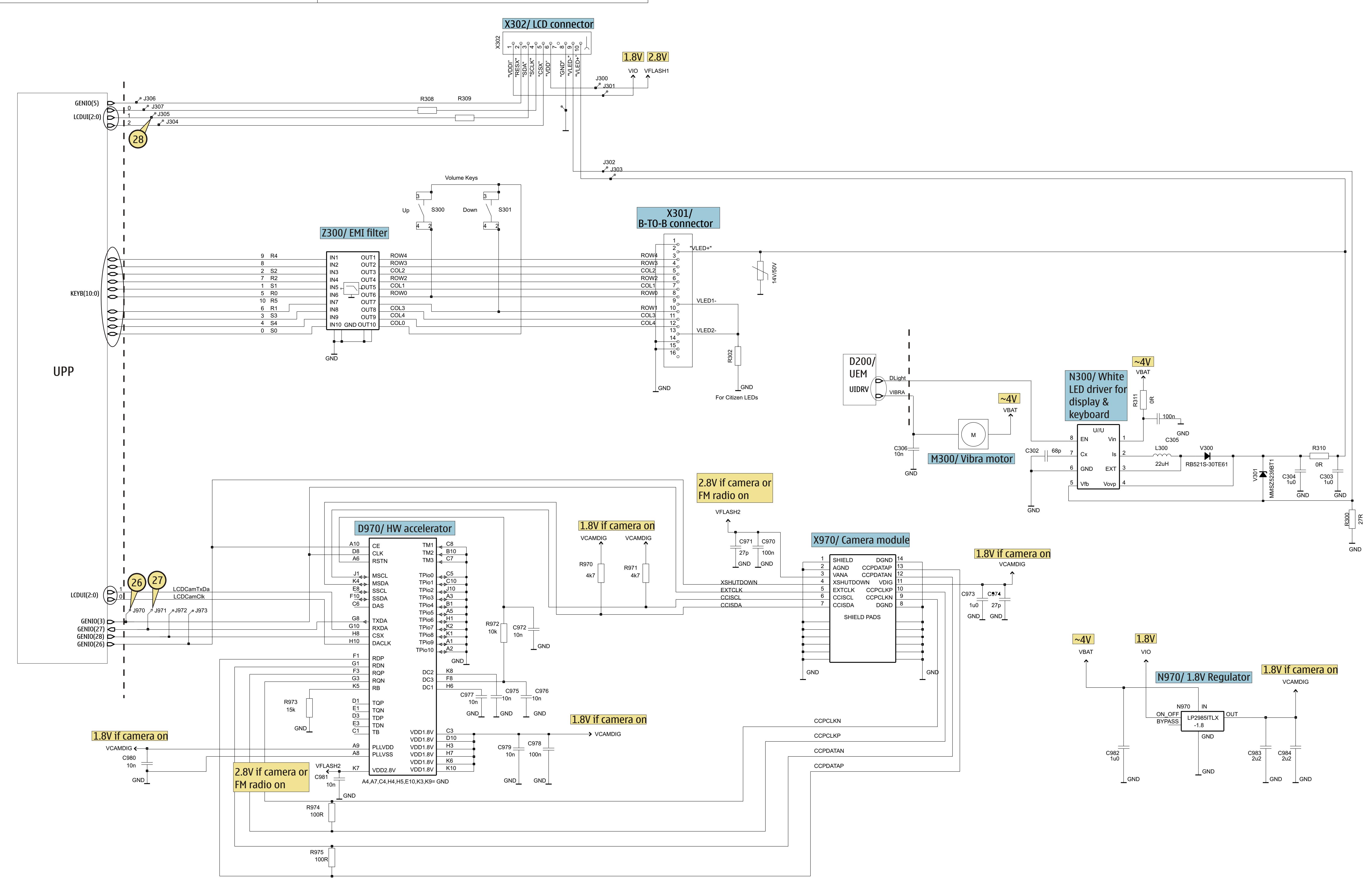


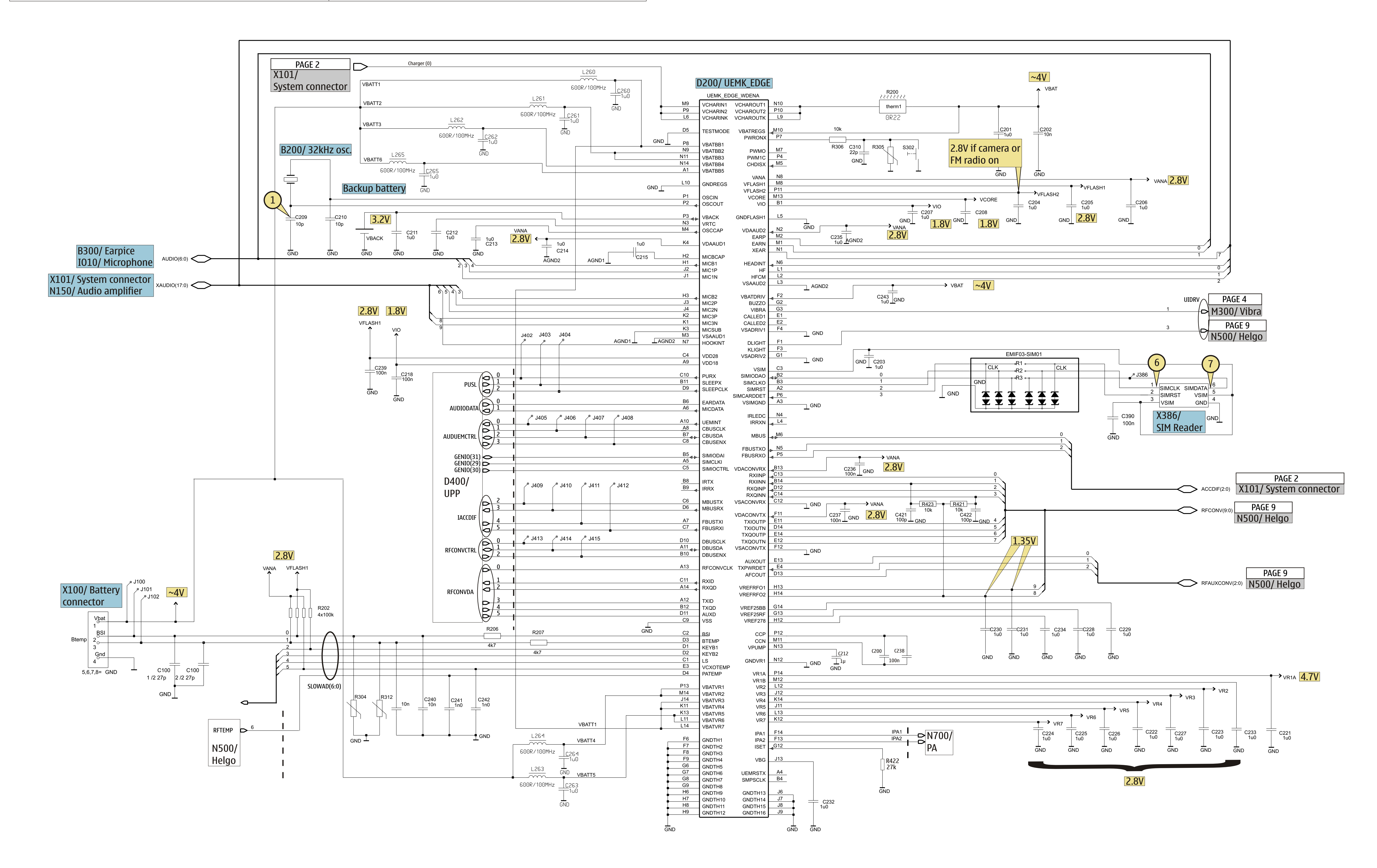
3,5mm DC connector
System connector
Charge
Charge GND
Charge
Shielding GND
Charge GND
ACI
Vout
USB Vbus
Fbus_RX / USB D+
Fbus_Tx / USB D-
Data GND
XMICN
XMICP
XEARN
XEARP
XEARRN
XEARRP
Shielding GND
2.8V
VFLASH1
1.8V
VIO
~4V
VBAT
D400/ UPP
IACCDIF(5:0)
GENIO(32:0)
IACCDIF(5:0)
N350/ Infrared
RPM960-H7E3A
Charger connector
X102
F100
L100
V100
D200/ UEM
Charger (4:0)
~4V
Vout = 2.8V
N100/Accesory regulator
LP3985IM5X
1.8V
2.8V
ACI pull up
D400/ UPP
GENIO(32:0)
XAUDIO(17:0)
D200/ UEM
ACCDIF(2:0)
HEADINT
MBUS
FBUS RXD
FBUS TXD
System connector
X101
X101/ System connector
L102
L103
L104
L105
BATT_IF
PAGE 5
XMIC(2:0)
D200/UEM
PAGE 3
XEAR(3:0)
N150/ Audio amplifier
PAGE 7
FMANT
N356/ FM radio

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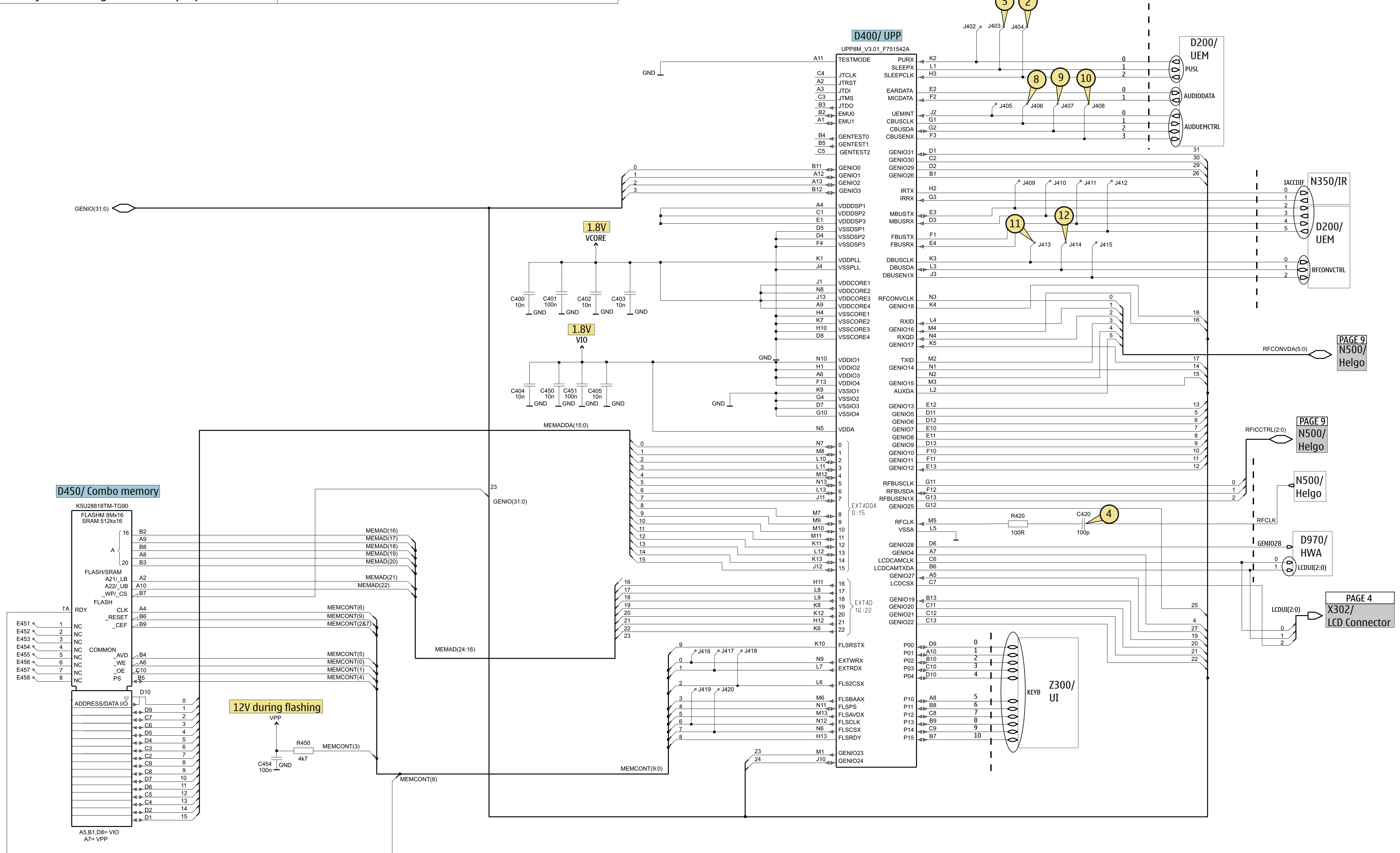

D200/
UEM
N356
FM RADIO
D400/
UPP
AUDIO(:0)
XAUDIO(17:0)
GENIO(32:0)
B300/ Earpiece
I010/ Microphone
N150/
Audio amplifier
IHF speaker connection
PAGE 2
X101/ System connector
"EARP"
"EARN"
"MICB1"
"MIC1P"
"MIC1N"
"HOOKINT"
"MICB2"
"MIC2P"
"MIC2N"
"HEADINT"
"MIC3P"
"MIC3N"
"PHONE AUDIO"
"FM-RADIO R"
"FM-RADIO L"
"MICP"
"XMICP"
"XMICN"
XMIC(2:0)
HEADINT
XEAR(3:0)
"LEFT N"
"LEFT P"
"RIGHT P"
"RIGHT N"
L150
MCZ1210AD102T
ENB
CLK
DATA
Rin
Lin
Bypass
Phone_inHS
Phone_inHF
SPKRout-
SPKROut+
ROut+
ROut-
LOut+
LOut-
C3,C5= VBAT
C1,C7= GND
VBAT
25
23
24

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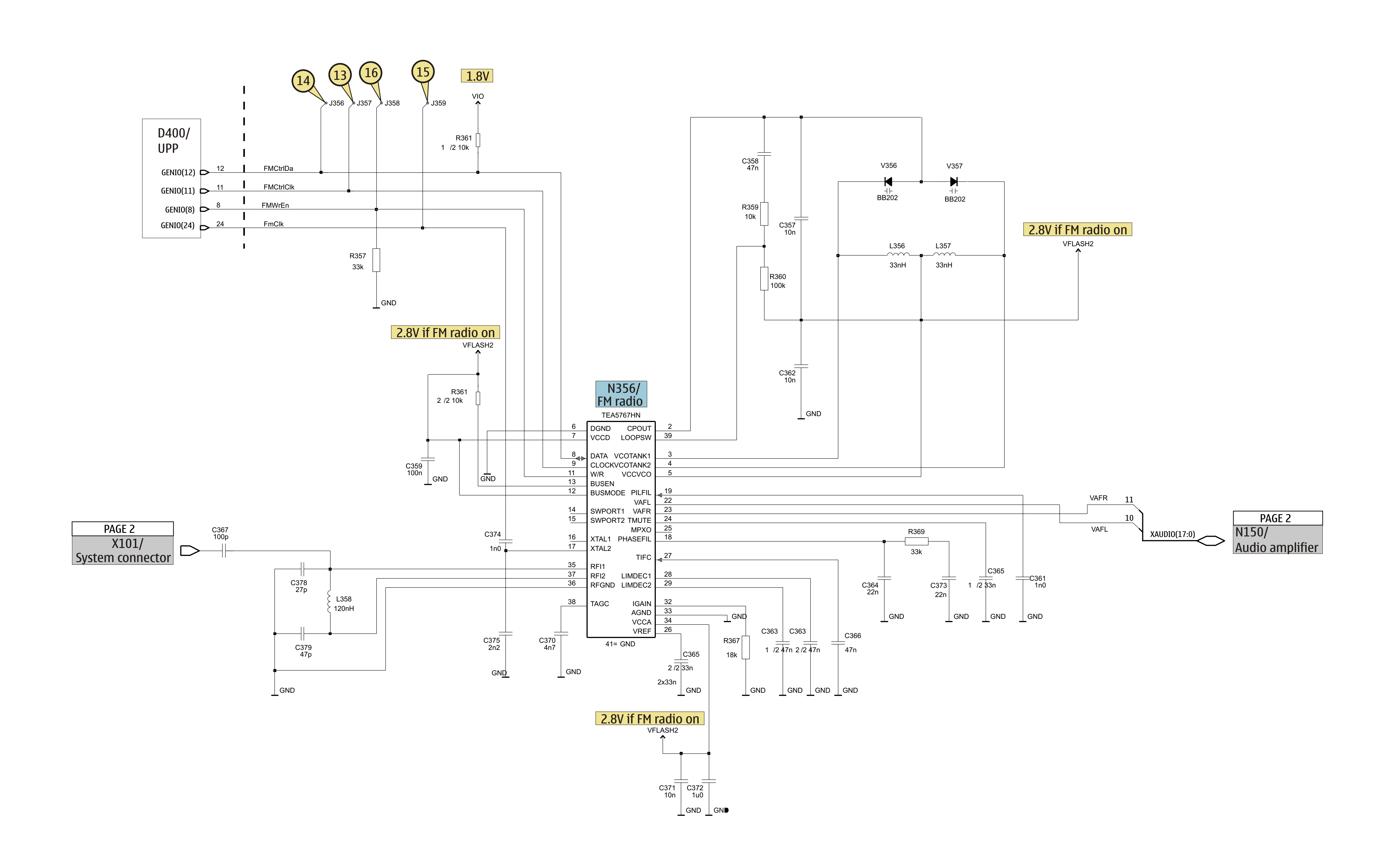

X302/ LCD connector
1.8V
2.8V
VIO
VFLASH1
GENIO(5)
LCDUI(2:0)
28
Volume Keys
Up
Down
S300
S301
Z300/ EMI filter
X301/ B-TO-B connector
KEYB(10:0)
UPP
For Citizen LEDs
D200/ UEM
UIDRV
DLight
VIBRA
~4V
VBAT
N300/ White LED driver for display & keyboard
M300/ Vibra motor
2.8V if camera or FM radio on
D970/ HW accelerator
1.8V if camera on
VCAMDIG
X970/ Camera module
LCDUI(2:0)
26
27
LCDCamTxDa
LCDCamClk
GENIO(3)
GENIO(27)
GENIO(28)
GENIO(26)
XSHUTDOWN
EXTCLK
CCISCL
CCISDA
CCPCLKN
CCPCLKP
CCPDATAN
CCPDATAP
VFLASH2
1.8V
N970/ 1.8V Regulator
LP2985ITLX -1.8
GND

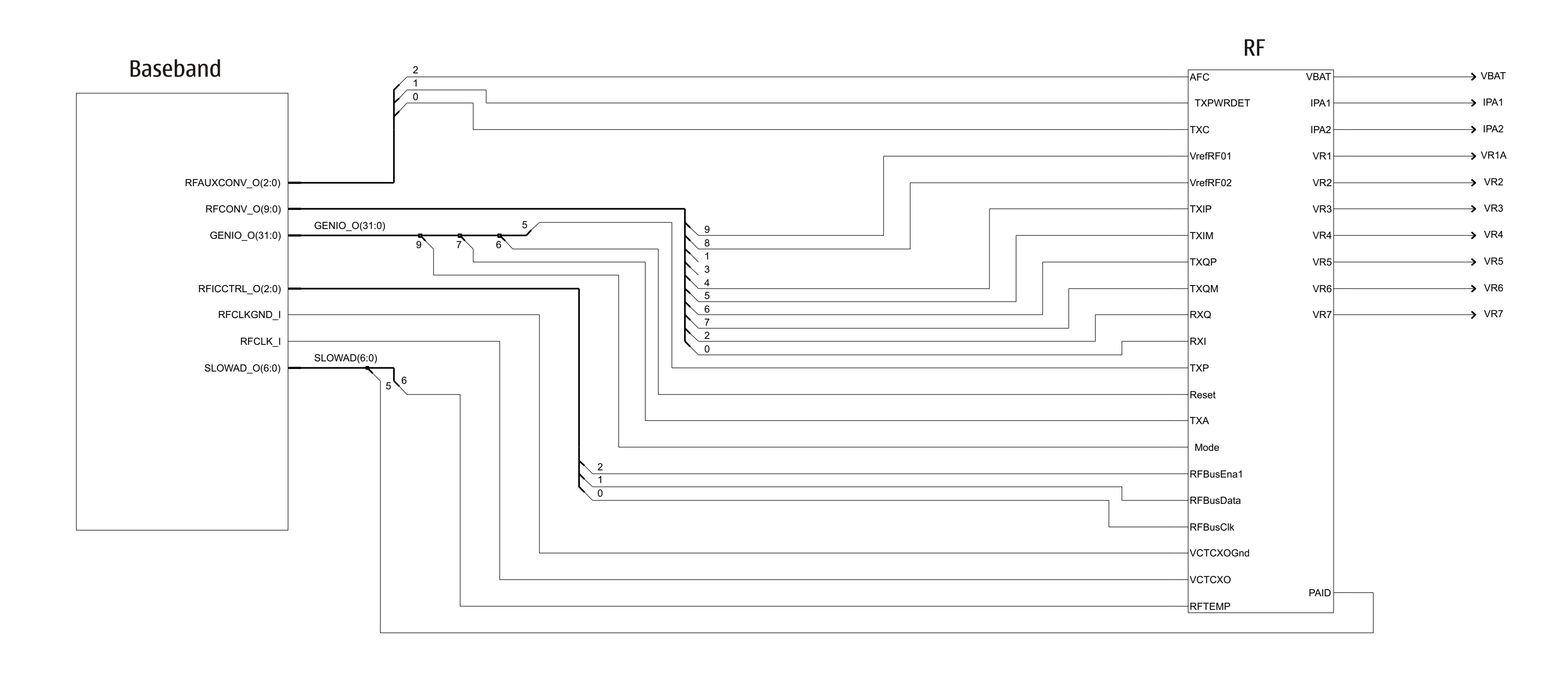


PAGE 2
X101/ System connector
D200/ UEMK_EDGE
UEMK_EDGE_WDENA
~4V
VBAT
B200/ 32kHz osc.
Backup battery
2.8V if camera or FM radio on
3.2V
2.8V
1.8V
B300/ Earpiece
I010/ Microphone
X101/ System connector
N150/ Audio amplifier
AUDIO(6:0)
XAUDIO(17:0)
PAGE 4
M300/ Vibra
PAGE 9
N500/ Helgo
EMIF03-SIM01
X386/ SIM Reader
D400/ UPP
PUSL
AUDIODATA
AUDUEMCTRL
IACCDIF
RFCONVCTRL
RFCONVDA
ACCDIF(2:0)
RFCONV(9:0)
RFAUXCONV(2:0)
1.35V
X100/ Battery connector
SLOWAD(6:0)
RFTEMP
N500/ Helgo
N700/ PA
4.7V
VR1A

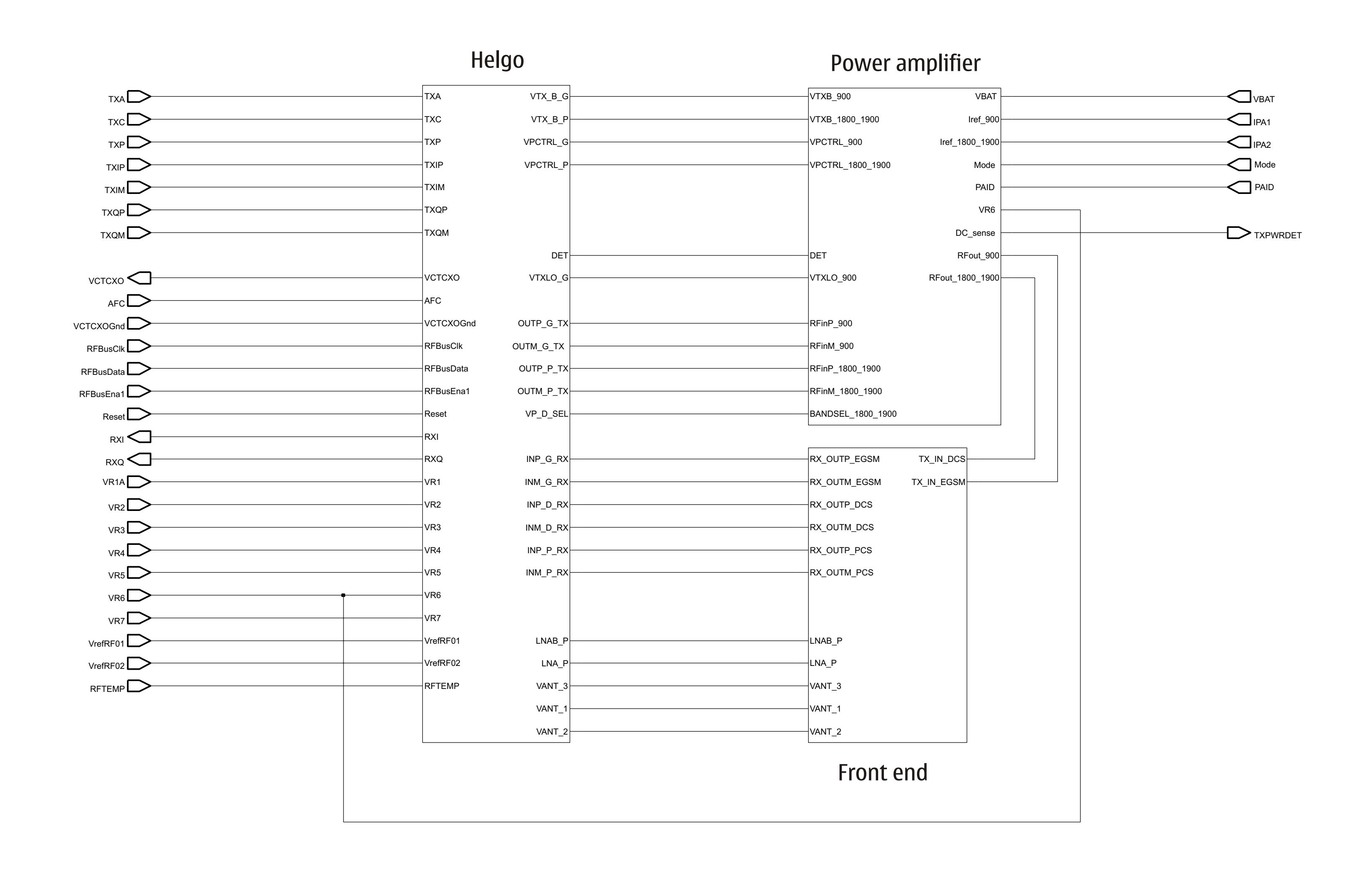


D400/ UPP
UPP8M_V3.01_F751542A
D200/ UEM
PUSL
AUDIODATA
AUDUEMCTRL
N350/IR
IACCDIF
RFCONVCTRL
PAGE 9
N500/ Helgo
RFCONVDA(5:0)
RFICCTRL(2:0)
RFCLK
D970/ HWA
GENIO28
LCDUI(2:0)
PAGE 4
X302/ LCD Connector
Z300/ UI
KEYB
1.8V
VCORE
VIO
GENIO(31:0)
MEMADDA(15:0)
MEMAD(24:16)
MEMCONT(9:0)
MEMCONT(8)
EXTADDA 0:15
EXTAD 16:22
D450/ Combo memory
K5U28818TM-TG90
FLASHM 8Mx16
SRAM 512kx16
FLASH/SRAM
ADDRESS/DATA I/O
A5,B1,D8= VIO
A7= VPP
12V during flashing
VPP
R450
4k7
C454
100n
R420
100R
C420
100p
C400 10n
C401 100n
C402 10n
C403 10n
C404 10n
C450 10n
C451 100n
C405 10n
GND


D400/ UPP
GENIO(12)
GENIO(11)
GENIO(8)
GENIO(24)
FMCtrlDa
FMCtrlClk
FMWrEn
FmClk
14
13
16
15
J356
J357
J358
J359
1.8V
VIO
R361 1 /2 10k
R357 33k
GND
2.8V if FM radio on
VFLASH2
R361 2 /2 10k
C359 100n
N356/ FM radio
TEA5767HN
DGND
VCCD
DATA
CLOCK
W/R
BUSEN
BUSMODE
SWPORT1
SWPORT2
XTAL1
XTAL2
RFI1
RFI2
RFGND
TAGC
CPOUT
LOOPSW
VCOTANK1
VCOTANK2
VCCVCO
PILFIL
VAFL
VAFR
TMUTE
MPXO
PHASEFIL
TIFC
LIMDEC1
LIMDEC2
IGAIN
AGND
VCCA
VREF
41= GND
C358 47n
R359 10k
C357 10n
R360 100k
C362 10n
V356
V357
BB202
L356 33nH
L357 33nH
PAGE 2
X101/ System connector
C367 100p
C378 27p
L358 120nH
C379 47p
C374 1n0
C375 2n2
C370 4n7
C365 2 /2 33n
2x33n
R367 18k
C363 1 /2 47n
C363 2 /2 47n
C366 47n
C364 22n
R369 33k
C373 22n
C365 1 /2 33n
C361 1n0
VAFR
VAFL
XAUDIO(17:0)
N150/ Audio amplifier
C371 10n
C372 1u0



Baseband
RF
RFAUXCONV_O(2:0)
RFCONV_O(9:0)
GENIO_O(31:0)
RFICCTRL_O(2:0)
RFCLKGND_I
RFCLK_I
SLOWAD_O(6:0)
AFC
TXPWRDET
TXC
VrefRF01
VrefRF02
TXIP
TXIM
TXQP
TXQM
RXQ
RXI
TXP
Reset
TXA
Mode
RFBusEna1
RFBusData
RFBusClk
VCTCXOGnd
VCTCXO
RFTEMP
PAID
VBAT
IPA1
IPA2
VR1
VR1A
VR2
VR3
VR4
VR5
VR6
VR7

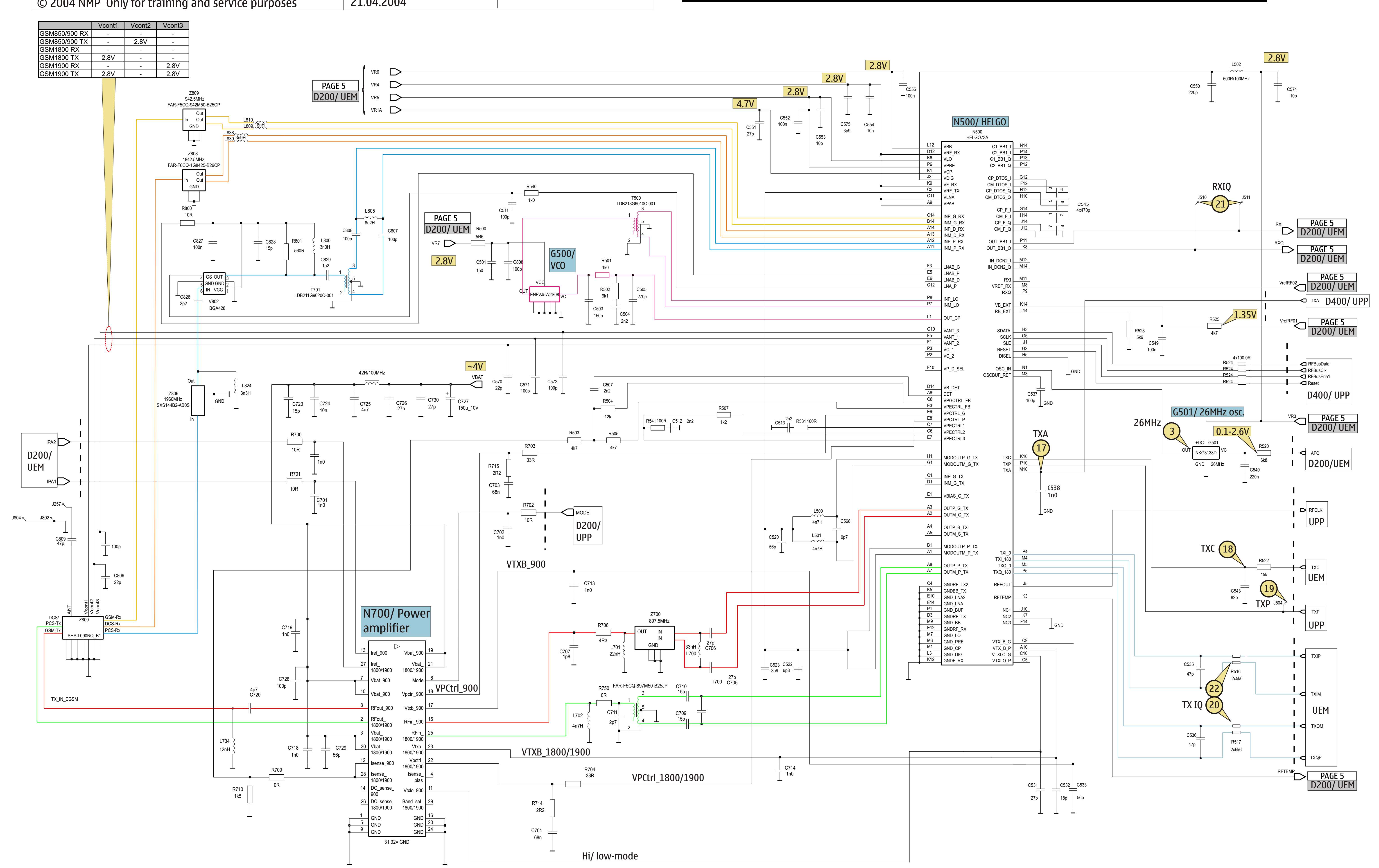


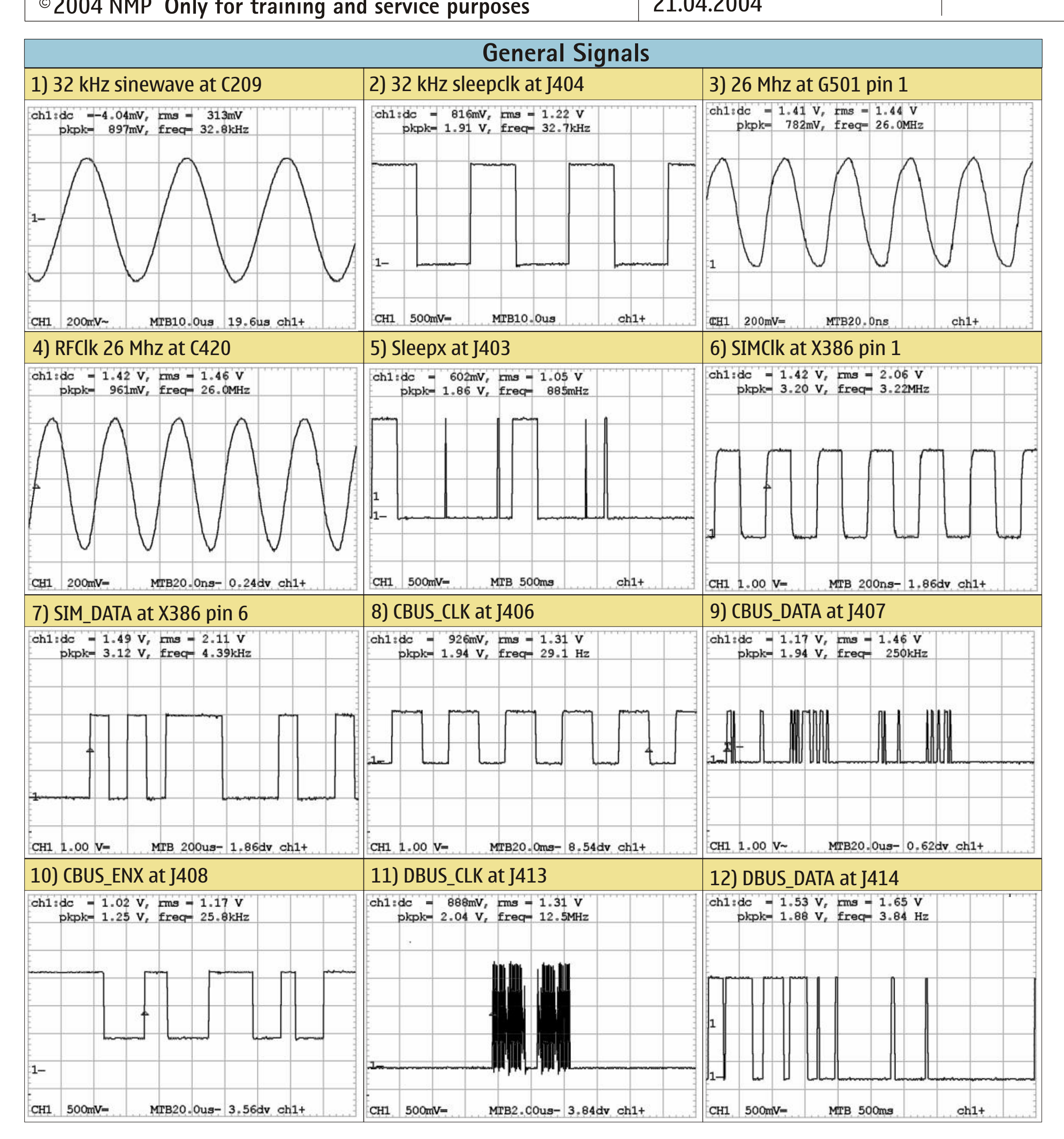
Helgo
Power amplifier
Front end
VTX_B_G
VTX_B_P
VPCTRL_G
VPCTRL_P
DET
VTXLO_G
OUTP_G_TX
OUTM_G_TX
OUTP_P_TX
OUTM_P_TX
VP_D_SEL
INP_G_RX
INM_G_RX
INP_D_RX
INM_D_RX
INP_P_RX
INM_P_RX
LNAB_P
LNA_P
VANT_3
VANT_1
VANT_2
VTXB_900
VTXB_1800_1900
VPCTRL_900
VPCTRL_1800_1900
VTXLO_900
RFinP_900
RFinM_900
RFinP_1800_1900
RFinM_1800_1900
BANDSEL_1800_1900
Iref_900
Iref_1800_1900
DC_sense
RFout_900
RFout_1800_1900
RX_OUTP_EGSM
RX_OUTM_EGSM
RX_OUTP_DCS
RX_OUTM_DCS
RX_OUTP_PCS
RX_OUTM_PCS
TX_IN_DCS
TX_IN_EGSM
TXPWRDET

NOKIA

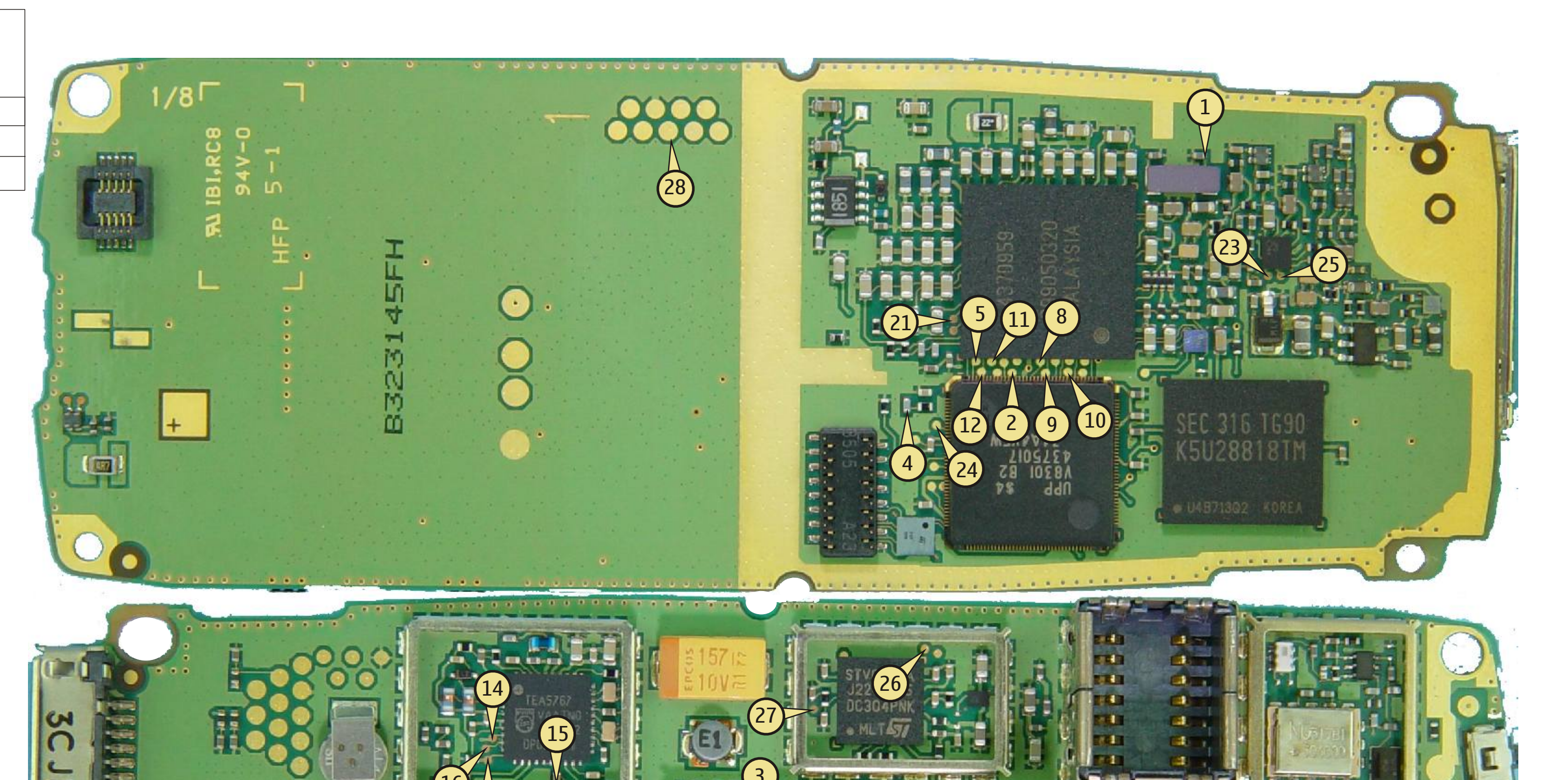
	CONFIDENTIAL		9(11)
Customer Care Europe, Middle East & Africa	RF-Schematics	Version 2.0 Approved	
SCCE Training Group	RH-20	(PCB) Version_1A0_09	
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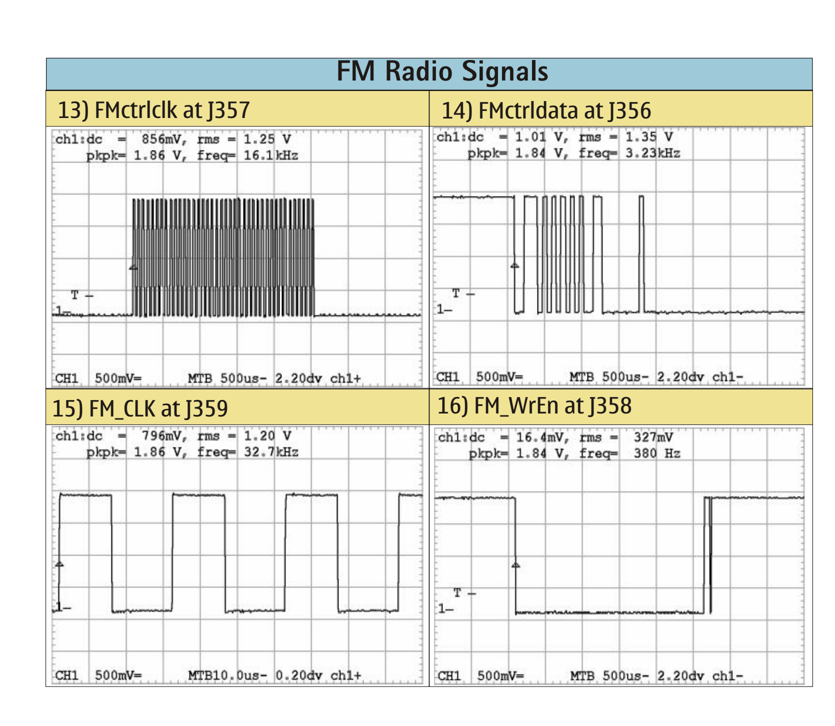
Band	Channel	RX	VCO/RX	VC/RX	TX	VCO/TX	VC/TX
GSM 900	37	942,4MHz	3769,6MHz	~ 2.72V	897,4MHz	3589,6MHz	~ 1.98V
GSM 1800	700	1842,8MHz	3685,6MHz	~ 2.37V	1747.8MHz	3495,6MHz	~ 1.59V
GSM 1900	661	1960MHz	3920MHz	~ 3.31V	1880MHz	3760MHz	~ 2.68V



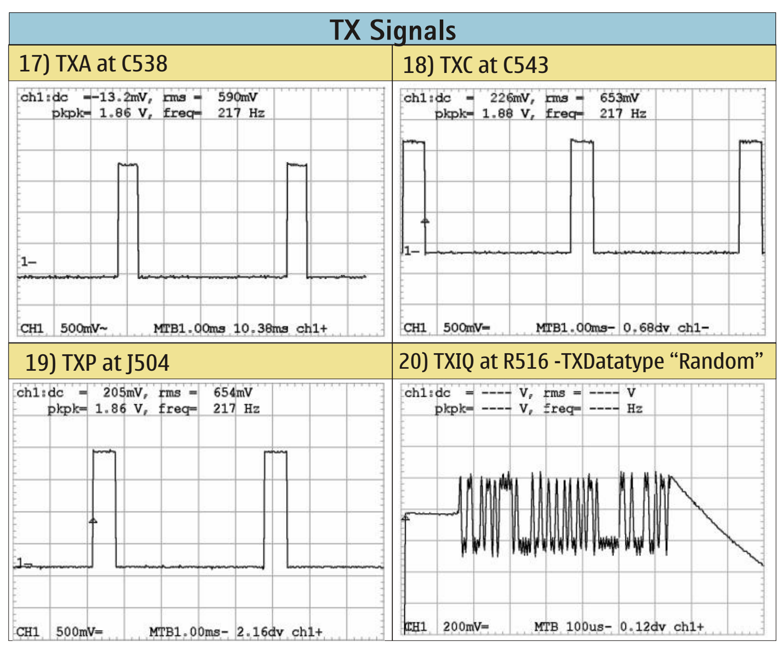


General Signals
1) 32 kHz sinewave at C209
2) 32 kHz sleepclk at J404
3) 26 Mhz at G501 pin 1
4) RFClk 26 Mhz at C420
5) Sleepx at J403
6) SIMClk at X386 pin 1
7) SIM_DATA at X386 pin 6
8) CBUS_CLK at J406
9) CBUS_DATA at J407
10) CBUS_ENX at J408
11) DBUS_CLK at J413
12) DBUS_DATA at J414

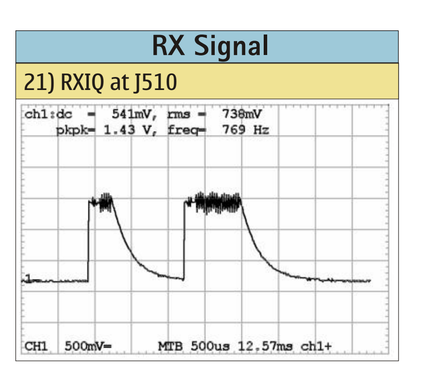




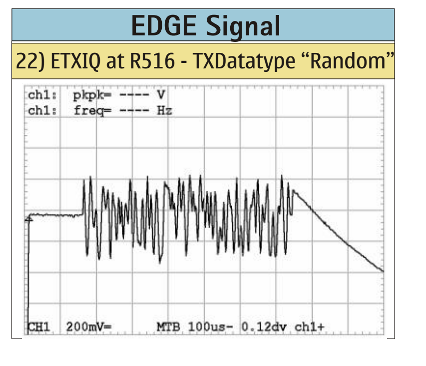
FM Radio Signals
13) FMctrlclk at J357
14) FMctrldata at J356
15) FM_CLK at J359
16) FM_WrEn at J358



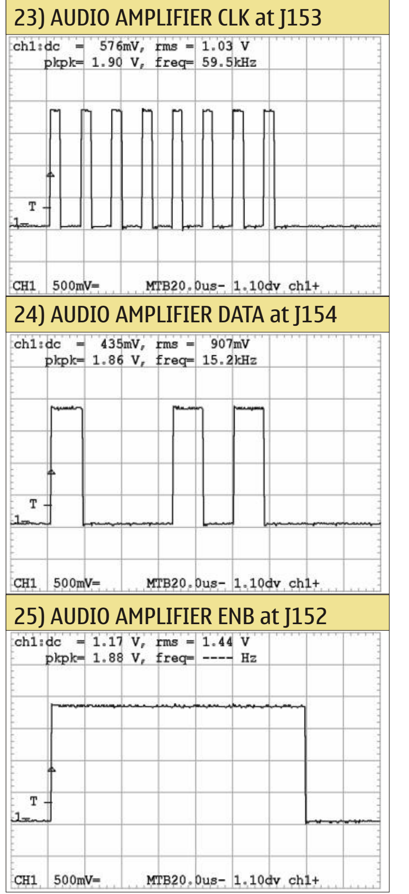
TX Signals
17) TXA at C538
18) TXC at C543
19) TXP at J504
20) TXIQ at R516 -TXDatatype "Random"



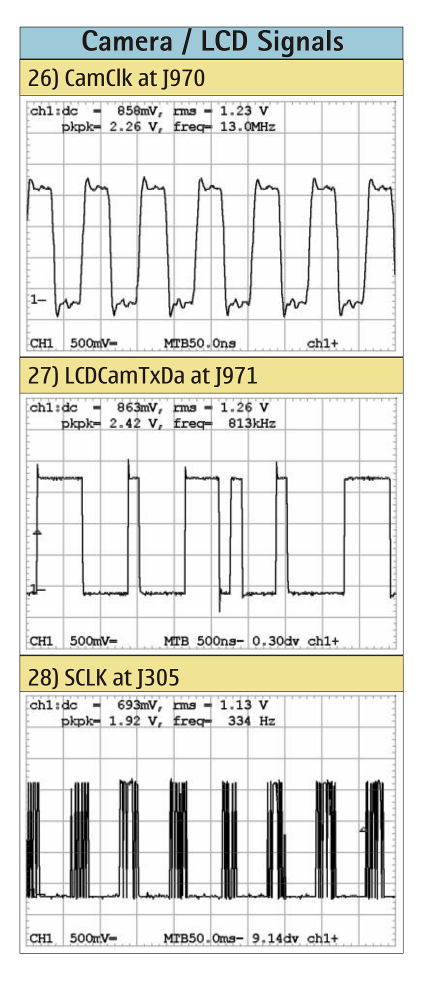
RX Signal
21) RXIQ at J510



EDGE Signal
22) ETXIQ at R516 - TXDatatype "Random"



Audio Signals
23) AUDIO AMPLIFIER CLK at J153
24) AUDIO AMPLIFIER DATA at J154
25) AUDIO AMPLIFIER ENB at J152



Camera / LCD Signals
26) CamClk at J970
27) LCDCamTxDa at J971
28) SCLK at J305

Customer Care Europe, Middle East & Africa	Component Finder	Version 2.0 Approved
SCCE Training Group	RH-20	(PCB) Version_1A0_09
	21.04.2004	

A	C223 - L6	C505 - K2	C972 - J6	R	R516 - L4
A356 - O6	C224 - L5	C507 - I4	C973 - G6	R100 - T5	R517 - L4
A500 - K3	C225 - M6	C511 - C7	C974 - G6	R101 - S5	R520 - L4
A700 - D5	C226 - M5	C512 - I5	C975 - I7	R102 - T5	R522 - L3
A970 - I7	C227 - L5	C513 - I5	C976 - J7	R103 - T5	R523 - K3
B	C228 - M5	C520 - J5	C977 - I7	R104 - S5	R524 - J5
B200 - P7	C229 - L5	C522 - J5	C978 - I6	R105 - S6	R525 - J2
C	C230 - L5	C523 - J5	C979 - H6	R106 - R6	R531 - I5
C100 - H2	C231 - M5	C531 - F5	C980 - J7	R107 - R6	R540 - C7
C101 - R5	C232 - M5	C532 - I4	C981 - I7	R108 - R6	R541 - I5
C102 - S4	C233 - M6	C533 - I4	C982 - H7	R109 - P5	R700 - F3
C103 - P6	C234 - M5	C535 - K4	C983 - H6	R111 - R4	R701 - F4
C104 - S5	C235 - P7	C536 - K4	C984 - G7	R151 - A3	R702 - D2
C106 - Q5	C236 - M4	C537 - K5	D	R152 - B3	R703 - E3
C107 - S7	C237 - M4	C538 - K3	D200 - O5	R153 - Q6	R704 - D2
C108 - S7	C238 - N7	C540 - L4	D400 - N3	R154 - Q6	R706 - F2
C109 - R7	C239 - Q5	C543 - L3	D450 - Q3	R155 - Q6	R709 - F4
C110 - R5	C240 - Q5	C545 - J2	D970 - J7	R156 - S5	R710 - F4
C112 - S4	C241 - Q5	C549 - J3	F	R157 - S5	R714 - D3
C113 - R6	C242 - Q5	C550 - J5	F100 - S3	R158 - R6	R715 - E3
C114 - S6	C243 - Q5	C551 - J5	G	R159 - Q7	R716 - D6
C115 - Q7	C260 - M6	C552 - K4	G300 - Q6	R163 - Q6	R717 - Q4
C116 - R7	C261 - O7	C553 - K4	G500 - L2	R164 - R5	R718 - D5
C117 - R7	C262 - M6	C554 - L4	G501 - L5	R165 - R6	R750 - C3
C118 - R7	C263 - M6	C555 - K3	L	R166 - R6	R800 - C8
C119 - R6	C264 - N7	C560 - K3	L100 - R4	R167 - R6	R801 - C7
C150 - Q6	C265 - Q5	C568 - J5	L101 - S5	R171 - S5	R970 - I6
C151 - R5	C302 - K6	C570 - B7	L102 - R7	R172 - P5	R971 - I6
C152 - S5	C304 - L7	C571 - I5	L103 - S6	R173 - Q6	R972 - J7
C153 - R5	C305 - L6	C572 - J2	L104 - R7	R200 - N7	R973 - I7
C154 - Q6	C306 - R5	C574 - L5	L105 - S7	R202 - P5	R974 - I6
C155 - P6	C310 - A5	C575 - I3	L106 - T4	R206 - P5	R975 - J6
C157 - S6	C350 - B4	C700 - F3	L107 - T4	R207 - P5	S
C158 - R6	C352 - A4	C701 - F4	L150 - A3	R301 - L7	S302 - A6
C159 - Q7	C353 - B3	C702 - D2	L151 - F5	R304 - H2	T
C160 - Q5	C357 - O7	C703 - E3	L152 - F4	R305 - A5	T500 - L3
C161 - Q6	C358 - O7	C704 - D2	L260 - M6	R306 - A5	T700 - C3
C162 - P6	C359 - O6	C705 - D2	L261 - O7	R307 - L4	T701 - D7
C163 - M6	C361 - M6	C706 - D2	L262 - M6	R308 - B6	V
C164 - F5	C362 - O6	C707 - F3	L263 - M6	R309 - B6	V100 - R4
C165 - P6	C363 - M7	C708 - I4	L264 - M7	R310 - G2	V300 - L6
C166 - R6	C364 - N5	C709 - C2	L265 - Q5	R311 - T3	V311 - S3
C167 - Q5	C365 - M6	C710 - C3	L300 - L6	R312 - S3	V312 - S4
C168 - P6	C366 - M7	C711 - C3	L356 - O7	R313 - T3	V313 - S3
C169 - Q5	C367 - O8	C713 - E3	L357 - O7	R314 - S3	V314 - S3
C170 - P6	C370 - O7	C714 - C3	L358 - N7	R315 - L7	V317 - S2
C171 - Q6	C371 - M7	C718 - F5	L500 - J5	R316 - S2	V318 - U3
C173 - G5	C372 - N7	C719 - D3	L501 - J5	R317 - K7	V319 - U2
C174 - G5	C373 - M5	C720 - D5	L502 - K5	R318 - T2	V320 - S2
C200 - N7	C374 - N6	C723 - C5	L700 - E2	R325 - L6	V356 - O7
C201 - M7	C375 - N5	C724 - D5	L701 - F2	R350 - B2	V357 - O7
C202 - M7	C378 - N7	C725 - C5	L702 - B3	R357 - O6	V802 - C7
C203 - P4	C379 - N7	C726 - B5	L703 - C5	R359 - O7	X
C204 - M7	C390 - S2	C727 - L7	L734 - D6	R360 - O7	X100 - G4
C205 - O7	C391 - M3	C728 - D3	L800 - C7	R361 - O6	X101 - T5
C206 - O7	C400 - P3	C729 - D5	L805 - I3	R367 - M7	X301 - L2
C207 - P4	C401 - P4	C730 - G5	L809 - J2	R369 - M5	X302 - B6
C208 - N7	C402 - M4	C734 - D6	L810 - I2	R388 - Q4	X305 - B4
C209 - P7	C403 - M2	C804 - C7	L824 - B7	R420 - M3	X386 - P3
C210 - Q7	C404 - P3	C805 - D7	L838 - I3	R421 - M4	X970 - F7
C211 - O7	C405 - M3	C806 - C7	L839 - I3	R422 - L4	Z
C212 - P7	C420 - M3	C807 - I3	N	R423 - L4	Z300 - M2
C213 - O7	C421 - M4	C808 - I3	N100 - S4	R450 - Q4	Z700 - E2
C214 - P6	C422 - M4	C809 - D7	N150 - R6	R500 - L3	Z800 - C6
C215 - P6	C450 - S2	C826 - B7	N300 - L6	R501 - K2	Z806 - B6
C218 - P5	C451 - P3	C827 - C8	N350 - A3	R502 - J2	Z808 - I2
C219 - N7	C454 - Q4	C828 - C8	N356 - N6	R503 - I4	Z809 - I2
C220 - Q5	C501 - K3	C829 - C8	N500 - J4	R504 - I4	
C221 - M7	C503 - K2	C970 - G7	N700 - D4	R505 - I4	
C222 - M6	C504 - K2	C971 - G7	N970 - H7	R507 - I5	

